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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/645,520	08/22/2003	Joachim Tachtler	080437.52615US	8771
23911	7590	10/18/2005		EXAMINER
CROWELL & MORING LLP INTELLECTUAL PROPERTY GROUP P.O. BOX 14300 WASHINGTON, DC 20044-4300			CREPEAU, JONATHAN	
			ART UNIT	PAPER NUMBER
			1746	

DATE MAILED: 10/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/645,520	TACHTLER ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Jonathan S. Crepeau	1746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 29 July 2005.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 5-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 5-9,11 and 12 is/are rejected.
- 7) Claim(s) 10 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | Paper No(s)/Mail Date. _____.   |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____.                                   |

## DETAILED ACTION

### *Response to Amendment*

1. This Office action addresses claims 5-12. Claims 5, 11, and 12 remain rejected over Diethelm. Claims 6-9 are newly rejected over Diethelm, but this rejection was not necessitated by amendment. As such, this action is non-final. Claim 10 contains allowable subject matter.

### *Claim Rejections - 35 USC § 102*

2. Claims 5-9, 11, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Diethelm (U.S. Patent 5,212,023). The reference is directed to a solid electrolyte fuel cell comprising an integrated heat exchanger (see abstract). The heat exchanger is an intermediate plate that separates two fuel cells (40) and comprises at least two partial elements (i.e., plates 31a, 31c) (see Figs. 3 and 5). Intake air (stream “A”) is passed through the heat exchanger and is then routed in the opposite direction across the surface of the cathode (stream “B”). Stream “A” is in direct thermal communication with stream “C,” the anode fuel gas, across plate 31c. Regarding claims 5 and 12, the “partial elements” can be defined as the flat central regions of the separator plates (31a, c) and as such are “mirror images” of each other. Regarding claim 6, if the “partial elements” are defined to include the peripheral regions of the plates, a baffle (47a) is present between the partial elements that causes successive, opposite-direction flow regions to develop in the heat exchanger. As shown in Fig. 6 and described at column 7, line 43, the

annular duct (47) on the outside of the baffle is a heat exchange region that corresponds to the claimed first partial flow region. Regarding claims 8 and 9, the “partial elements” may also be defined to include nubs or spacer elements (shown near 46’ and 44 in Fig. 6).

Thus, the instant claims are anticipated.

*Response to Arguments*

3. Applicant’s arguments filed July 29, 2005 have been fully considered but they are not persuasive. Applicant asserts that the amendments to claims 5 and 12 distinguish over the Diethelm reference because the reference discloses only a solid, asymmetric, one-piece separator and not two or more (mirror image) partial elements. However, it is submitted that recitation of “partial elements” does not imply that such partial elements must be discrete, separate elements that are formed or joined into an integral structure. As such, “partial element” is interpreted herein as any piece or section of the separator structure of Diethelm. Accordingly, claims 5-9, 11, and 12 are believed to be properly anticipated by the reference.

***Allowable Subject Matter***

4. Claim 10 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is a statement of reasons for the indication of allowable subject matter:

Claim 10 recites that the surfaces of the nubs come into contact with the baffle. Diethelm does not teach or fairly suggest this configuration.

***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Crepeau whose telephone number is (571) 272-1299. The examiner can normally be reached Monday-Friday from 9:30 AM - 6:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr, can be reached at (571) 272-1414. The phone number for the organization where this application or proceeding is assigned is (571) 272-1700. Documents may be faxed to the central fax server at (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jonathan Crepeau  
Primary Examiner  
Art Unit 1746  
October 14, 2005